

Course Objective

The objective of this patented MIS program is to raise technical competency of technical employees from semiconductor industry for product quality & productivity improvement through understanding of vital manufacturing variables. At the end of the MIS training, participants will realize the importance of technical details study & the introduction of science & engineering procedures to their existing practices for a profitable manufacturing operation.

Session Overview

Today's semiconductor industry requires manufacturing at low costs and high quality. Rejects and tooling downtime are killing. Therefore, continuous productivity improvement throughout the microelectronic packaging assembly process is essential to achieve production economy. Molding and trim & form process are critical manufacturing activities in plastic packaging than any other piece of equipment. This end of line process involves considerable amounts of investment in presses, tooling, floor space & labor. It has a major impact on packaging productivity & yield.

The evolution of the technology to higher lead counts, thinner leadframes, and closer lead spacing places greater emphasis on the engineering time devoted to mold, trim & form design, implementation, and problem solving. This comprehensive technical training for semiconductor industry will explain how the leadframe material, tooling, processing methods, preceding & existing operations control can impact the defects & problems in trim & form operations. Both practical and fundamental concepts are discussed in the training course.

Benefits

1. Study variables affecting trim & form package quality.
2. Discover how clearance could affect sheared edge finish, slug jamming & slug pulling.
3. Understand leadframe material forming limit & characteristics that can affect the trim & form result.
4. Learn proper processing control to achieve consistent trim & form results.

Course Contents

1. Leadframe Structure & Quality Issues

Leadframe terminology, process flow for package assembly, preceding & existing conditioning prior T&F, dimensional & visual qualities, T&F defects & influencing factors.

2. Leadframe Materials Characteristics

Electrical/Thermal properties, formability, strength & hardness, leadframe materials classification & temper designation, alloys manufacturing & leadframe production methods, ductility & material quality, types of stresses, work hardening & springback effects.

3. Leadframe Sheared Edge Finish and Control

Sheared edge study, clearance design & deformation modes, clearance distribution, clearance location, slug pulling & jamming control, cutting force, cut size characteristics.

4. Leadframe Formability & Processing Control

Stress & resistance control, Processing issues, design control, cut quality control, dicing process control, materials control, machine control, springback control, electroplating control, overstress control, tooling control.

Course Instructor



William Lee - Malaysian, Materials Engineer with an honorable Bachelor Degree awarded by The Engineering Council of London (EC, UK). He has over 28 years working & teaching experience in manufacturing industry. William possesses strong fundamentals knowledge in technical science & has special talent to communicate and explain to others the principles involved in various engineering fields. His ability to present and link the various engineering disciplines with real industrial use has made many of his course participants to appreciate the significant of technical details study for manufacturing improvement.

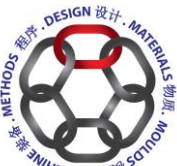
Over the years, he has developed a series of patented Manufacturing Insights Skills (MIS) Training programs for various manufacturing industries. He is now a full time contract speaker for a few training organizers as well as professional associations in ASEAN & Australia. William will bring a wealth of teaching experience to this program along with his strong industrial background as a former engineering practitioner in tooling, materials, heat treatment, moulding & metal forming divisions. In addition, William is a versatile trilingual instructor who can instruct technical courses in English, Bahasa Malaysia or Mandarin (or a combination of the languages) to ensure full understanding of his presentation by his trainees from all levels.

Target Participants

This course is specially designed for semiconductor industry. Target audience can be those involved in microelectronic package assemble process. Technical personnel such as production managers, T&F engineers, molding engineers, technicians, and specialists, supervisors, tooling engineers, tool makers, quality controllers, testing & reliability engineers, and R&D researchers are encouraged to participate in this information packed technical event.

Administrative Details

1. Should public training not be scheduled for this program we will consider opening an ad hoc public training class if you've minimum guaranteed participants to attend this program.
2. We can bring this program to your premises as in-house training event for your in-house employees only. Interested participating company may contact us for an in-house training proposal.
3. In-house training can be conducted on weekdays or weekends (including public holidays) to meet the scheduling needs of your targeted staff.
4. For in-house training, a list of participants complete with their full name & designation must be presented to training provider one week prior commencement of each program. The total no. of training manual is supplied to the actual no. of turned out attendees only.
5. Substitute is allowed to replace the earlier registered person if he / she is unable to attend the training program (both public and in-house training). Participating company must inform us the details of replacement person.
6. All programs are of SBL (Skim Bantuan Latihan) type. Eligible company (Human Resources Development Fund contributor) must apply through themselves for the rebate of any eligible expenses (including training fees) from Human Resources Development Council. Training provider bears no responsibility for the approval of training grants or any form of rebates between participating company and HRDC.



Organized by:

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